

REMARKS

Claims 1-15 are all the claims pending in the application and stand rejected.

Claim Rejections - 35 U.S.C. § 103(a) - Claims 1-6, 8-9 and 12-15

The Examiner rejected claims 1-6, 8-9 and 12-15 under § 103(a) as being unpatentable over Matsubara et al. (US 5,712,666) in view of Wise (US 5,809,884). Applicant traverses this rejection as follows.

Matsubara is related to a recording apparatus having a recording head 34 comprised of 128 orifices positioned across the head. (cols. 12-13) The apparatus also includes a reading sensor 125, which obtains the density data of a test pattern for shading correction. (col. 16, lines 12-16).

Wise relates to a continuous web printing process including a printer 30 followed by a scanner 32, wherein the scanner scans the printed material to verify that each segment printed on the continuous web has been printed without error. (col. 5, lines 5-32).

Claim 1 recites, *inter alia*, further comprising a detection means that is fixedly positioned to said conveyed recording medium.

In the rejection, the Examiner contends that Matsubara teaches or suggests most of the features recited in claim 1. However, the Examiner concedes that Matsubara fails to teach or suggest a detection means that is fixedly positioned in relation to said conveyed recording medium. (*Office Action*, p. 2). To compensate for the deficiencies of Matsubara, the Examiner applies Wise, alleging that it teaches or suggests a detection means fixedly positioned in

relation to a conveyed recording medium. (*Id.*; citing figure 2 (32, 38) and column 3, lines 20-42 of Wise).

As a teaching, suggestion or motivation to combine, the Examiner provides:

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the teachings of Matsubara in the context of a continuous web printing system, as taught by Wise. The suggestion for doing so would have been to improve a different type of printer system, in this case a continuous printing system.

(*Office Action*, p. 3).

In response, Applicant submits that the Examiner has failed to establish *prima facie* obviousness because the purported motivation to combine provided by the Examiner is wholly unsupported and, additionally, the suggested combination would render Matsubara unsatisfactory for its intended purpose. Finally, even if Matsubara could be combined with Wise to incorporate the first scanner of Wise, the suggested combination fails to teach or suggest, "a detection means fixedly positioned in relation to said conveyed recording medium," as recited in claim 1.

Motivation To Combine Unsupported

The Examiner contends that the suggestion for modifying Matsubara to include a detection means fixedly positioned in relation to said conveyed recording medium would be to provide a continuous printing system. Applicant submits the Examiner's proffered suggestion to combine provides no nexus between modifying Matsubara to have a fixed detection means and the conversion to a continuous printing system. In fact, Wise provides no support indicating that providing a fixed detection means is even necessary to provide a continuous printing system. Moreover, Wise fails to even teach or suggest a fixed detector (first scanner).

In particular, Wise merely teaches of using a first scanner 32 positioned after a first printer 30 (block diagram). (*See* FIG. 2). No portion of Wise teaches or suggests that the first

scanner 32 is even fixed with respect to the conveyed recording medium. To the contrary, Applicant submits the scanner 32 must be configured to move with respect to the conveyed recording medium such that it is not fixed at all.

For example, even though Wise teaches the use of a continuous web in the printing process. Wise does not disclose a printing system wherein the web is continually moved through the apparatus. In fact, Wise actually teaches that the web is not continuously moved through the printer system. Specifically, Wise engages in a *segment by segment printing and verification system* which performs a scan on each printed segment, and only advances the web after the scan is performed.

More specifically, Wise engages in the following process:

- (1) print a record W_n on segment S_n ;
 - (2) read the data record W_n using the scanner 32;
 - (3) compare the read data W_n to a data record D_n ;
 - (4) determine if an error has occurred during printing based on the comparison;
 - (5) **advance the continuous web to repeat the aforementioned steps for each logical segment.**
- (col. 2, lines 1-20).

Accordingly, to the extent that Wise uses a continuous web, the printing and scanning is performed on a segment S_n by segment S_{n+1} basis, wherein the web is stationary during scanning, and then, forwarded to the next segment after scanning is completed. Thus, the process of Wise is no more continuous as a printing system than is Matsubara.

Moreover, the Examiner seems to imply that Matsubara is not a continuous process. However, in contrast, Applicant submits Matsubara, alone, teaches that the recording paper 32 can be a continuous web as illustrated in FIG. 7. Therefore, there is simply no basis in the

Examiner's purported motivation to combine Matsubara and Wise in order to create a continuous printing system, because both systems are already configured to reproduce on continuous webs and each perform batch processing on a segment of the web. Simply modifying Matsubara with a detection means fixedly positioned in relation to the conveyed recording medium would not have any positive impact in this regard, thus, the Examiner's proffered motivation to combine one not lead one of ordinary skill in the art to modify Matsubara as suggested.

Even further, there is no support that the scanner of Wise is fixed; to the contrary, Wise implies that its scanner must be movable. For example, the only schematic illustrating the system is a block diagram (FIG. 2), which fails to teach or suggest that the scanner is fixed with regard to the recording medium. More importantly, however, is the fact that the method taught in Wise teaches that the printing and scanning (reading) steps are performed while the continuous web is stopped in order to expose a segment S_n to these processes. For example, the method of FIG. 6D shows that the segment is first identified (step 144). After the segment is identified, color features are printed (step 146), and then read using the scanner (step 148). Next, in step 156, the web is advanced to the next segment.

Thus, because the web does not move during the scanning and printing steps (batch processing), the Examiner's position that the scanner 32 is fixedly positioned with regard to the webbing 38 is wholly unsupported. If the web is not moving, the first scanner 32 must move to perform the scanning.

Therefore, in conclusion, Applicant submits that the Examiner has misread Wise as showing a fixed scanner, and further, incorrectly attempts to modify Matsubara based on this

assumption to provide a continuous printing system that is no more continuous than that already present in Matsubara.

Modification Would Render Matsubara Unsatisfactory For Its Intended Use

Secondly, providing Matsubara with a scanner which is fixed in relation to the conveyed recording medium would render Matsubara unsatisfactory for its intended purpose.

In particular, Matsubara uses the scanning head 124 to read out four colors in succession.

The shading data on one color is obtained by one scanning of the reading head, the test pattern is then scanned as the reading head moves to an X direction shown in FIG. 10, and the test pattern with a next color is read out. When the shading data is obtained with respect to four colors, the read-out of the test pattern is completed.

(*Matsubara*, col. 14, lines 2-9).

To this end, Matsubara performs four scans on the same test pattern in order to measure the density values of each color independently. However, if Matsubara is modified as suggested by the Examiner to provide a detection means fixedly positioned in relation to the conveying medium, only one scan would be performed. In particular, the scan would only be performed as the conveying medium was conveyed past the fixed detection means.

Accordingly, Matsubara's recording apparatus would be rendered unsatisfactory for its intended use, i.e. performing four independent scans of the recording medium.

Because the Examiner has failed to provide a valid reason which would lead one having ordinary skill in the art to modify Matsubara, no *prima facie* case of obviousness has been established. Thus, Applicant submits that claim 1 is allowable for at least this reason. Additionally, Applicant submits claims 2-6, 8-9 and 12-15 are allowable, at least because of their dependency.

Suggested Combination Fails To Teach or Suggest All Recited Features

Furthermore, even if combined as suggested by the Examiner, the applied combination fails to teach or suggest, at least, “a detection means fixedly positioned in relation to said conveyed recording medium,” as recited in claim 1.

As set forth above, because Wise teaches of using a batch process to process each segment S_n , it is implied that for scanning to occur as outlined in FIG. 6D, that the scanner is not fixedly positioned with regard to a conveyed recording medium. Rather, it is implied that because the printing and scanning are performed before the web is advanced in step 156, that the first scanner 32 must move in order to perform a scanning of the webbing 41. Therefore, because neither Wise nor Matsubara teach or suggest a detection means fixedly positioned, the suggested combination fails to teach or suggest all of the features recited in claim 1.

Thus, Applicant submits that claim 1 is allowable for at least this reason. Additionally, Applicant submits that claims 2-6, 8-9 and 12-15 are allowable, at least because of their dependency.

Claim Rejections - 35 U.S.C. § 103(a) - Claims 7 and 10-11

The Examiner rejected claims 7 and 10-11 under § 103(a) as being unpatentable over Matsubara in view of Wise and Rolleston (US 5,416,613).

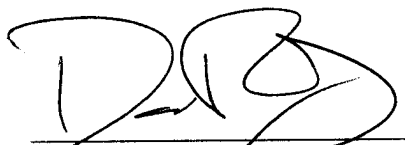
Applicant submits that because Rolleston, either taken alone or in combination with Wise and Matsubara, fails to compensate for the above noted deficiencies of the Matsubara/Wise combination as applied to claim 1, that claims 7 and 10-11 are allowable, at least because of their dependency from claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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